

# Trunnion mounted

**TIV trunnion mounted ball valves** are customized, high-quality and reliable valves for a wide range of application, from traditional Oil & Gas (upstream, midstream and downstream) to green and renewable energies services. A ball valve is a form of quarter turn valve which uses a hollow, perforated and pivoting ball to control flow through it. It is open when the ball's hole is in line with the flow and closed when it is pivoted 90 degrees.



Oil &amp; gas production



Green gas production



Gas transmission HP



Gas distribution MP



Medium/small industry

Features	Values
Pressure rating*	<ul style="list-style-type: none"> <li>ANSI classes from 150 to 2500</li> <li>API pressure ratings from 13.8 MPa to 103.5 MPa</li> <li>from 138 barg to 1035 barg</li> </ul>
Design temperature*	from -196 °C to +538 °C from -321 °F to +1000 °F
Nominal sizes*	1/2" to 60" NPS 15 to NPS 1500
Connections*	<ul style="list-style-type: none"> <li>RF and RTJ flanges as per ASME B16.5, B16.47 and MSS SP-44</li> <li>Butt welding ends as per ASME B16.25</li> <li>6B and 6BX flanges as per API 6A</li> <li>Threaded and socket weld ends</li> <li>Hub ends as per customer specifications</li> </ul>
End to end dimensions*	<ul style="list-style-type: none"> <li>ASME B16.10</li> <li>API 6A</li> <li>TIV standard for sizes not covered by above specifications</li> <li>As per customer specifications</li> </ul>
Top mounting	ISO 5211
Construction*	<ul style="list-style-type: none"> <li>Side entry bolted body</li> <li>Top entry bolted body</li> <li>Side entry welded body</li> <li>Modular bolted body (two balls in one body)</li> </ul>
Operator*	<ul style="list-style-type: none"> <li>Bare stem</li> <li>Gear operated</li> <li>Motor operated (pneumatic, hydraulic, gas over oil or electric actuator)</li> </ul>

**(\*) REMARK: Due to normative limitations or technical feasibility, not all combinations of above features and materials are available. Please contact TIV Valves for further information about actual configurations based on service requirements.**

**Table 1** Features

## Materials and Approvals

Part	Material
Metallic materials*	<ul style="list-style-type: none"> <li>Carbon steel and low temperature carbon steel</li> <li>Stainless, duplex and super-duplex stainless steel</li> <li>Exotic alloys</li> </ul>
Soft parts*	<ul style="list-style-type: none"> <li>Polymeric (PTFE, RPTFE, PEEK, Devlon-V, PCTFE)</li> <li>Elastomeric (FKM, FFKM, HNBR)</li> <li>Graphite</li> </ul>
Coatings*	<ul style="list-style-type: none"> <li>Electroless Nickel Plating (ENP)</li> <li>Weld overlay (316SS, N06625)</li> <li>HVOF (Tungsten or Chromium Carbide Coating)</li> </ul>

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**Table 2** Materials

### Product certification:



API 6D  
Cert. no.  
6D-1170



API 6A  
Cert. no.  
6A-1252



API 6DSS  
Cert. no.  
6DSS-0057



IEC 61508 SIL 2  
Cert. no.  
50 100 13288  
REV.005

### System certifications:



ISO 9001  
Cert. no.  
50 100 9927  
Rev.006



ISO 14001  
Cert. no.  
50 100 13288  
REV.005



ISO 45001  
Cert. no.  
50 100 13322  
REV.005

TIV Valves production range has also a wide coverage for fire-safety as per API 607 and API 6FA and for fugitive emissions as per ISO 15848-1. In addition, thanks to a long-term cooperation with international energy companies and EPC contractors, TIV complies with many customers specifications, including design validation procedures.